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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,982

05/01/2007

Mark S. Turner

050021-0026

1918

41552

7590

09/16/2008

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EXAMINER

ARCHIE, NINA

ART UNIT

PAPER NUMBER

1645

MAIL DATE

DELIVERY MODE

09/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,982	Applicant(s) TURNER ET AL.	
	Examiner Nina A. Archie	Art Unit 1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-21 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/24/2006 and 7/12/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings in this application have been accepted. No further action by Applicant is required.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Information Disclosure Statement

The information disclosure statement filed on 4/24/2006 and 7/12/2006 has been considered. Initialed copies are enclosed.

Election/Restrictions

Applicant's election with traverse of Group I claims (12-19 and 22) is acknowledged. The traversal is on the ground(s) that while Groups II and III are directed to a specific peptide of the invention (i.e., SEQ ID NO:5), as well as the peptide which further includes a secretion signal sequence (SEQ ID NO:6), Group I is directed to specific peptides (i.e., LysM, apf-life domains, glutamine rich region) which form the structural basis of SEQ ID NOS:5 and 6. Therefore, a thorough search of the claims of Groups I, II and III would likely reveal art relevant to the examination of the claims of the other groups because the peptides of Group I compose, in part, the sequences of Groups II and III. This is further indicated by the fact that all the sequences of Group I are incorporated into the sequences of Groups II and III. Thus, a search of the claims of

Art Unit: 1645

Group I will, of necessity, reveal information relevant to the examination of the claims of Group II and III and, therefore, division of the claims into these groups would result in duplicative searches. Therefore, examination of the claims of Group I with the claims of Group II and III together should not be an undue burden on the Examiner.

Examiner accepts Applicant's Remarks the restriction will be withdrawn.
Therefore claims 12-22 will be examined.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 12-21 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. .

Claims 12-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention is drawn to a product of nature. Products of nature are not patentable because they do not reflect the "hand of man" in the production of the product or manufacturing process. Diamond v. Chakrabarty, 206 USPQ 193 (1980). Additionally, purity of naturally occurring product does not necessarily impart patentability. Ex parte Siddiqui 156 USPQ 426 (1966). However when purity results in new utility, patentability is considered. Merck co. V. Chase Chemical Co. 273 F. Supp 68 (1967). See also American Wood v. Fiber Disintegrating Co., 90 US 566 (1974); American Fruit Growers v. Brogdex Co. 283 US 1 (1931); Funk Brothers Seed Co. V. Kalo Inoculant Co. 33 US 127 (1948). In the instant case recitation of a peptide does not indicate the hand of man because peptides are naturally occurring, therefore the peptide is deemed products of nature.

Claim Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12-15 rejected under 35 U.S.C. 102(b) as being anticipated by Venutura et al 2002 Applied Environ. Microbiol. Vol. 68 6172-6181.

Ventura et al teach a peptide having at least 75% amino acid homology with the sequence shown in SEQ ID No: 2, wherein the amino acid homology with the sequence shown in SEQ ID No: 2 is at least about 80%, wherein the amino acid homology with the sequence shown in SEQ ID No: 2 is at least about 85%, wherein the amino acid homology with the sequence shown in SEQ ID No: 2 is at least about 90% (see STIC Results).

Claims 12-15 rejected under 35 U.S.C. 102(b) as being anticipated by Ehrmann M.A. Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.

Ehrmann M.A. teach a peptide having at least 75% amino acid homology with the sequence shown in SEQ ID No: 2, wherein the amino acid homology with the sequence shown in SEQ ID No: 2 is at least about 80%, wherein the amino acid homology with the sequence shown in SEQ ID No: 2 is at least about 85%, wherein the amino acid homology with the sequence shown in SEQ ID No: 2 is at least about 90% (see STIC results).

Status of the Claims

Art Unit: 1645

No claims allowed.

Claims 12-21 are rejected.

Claim 22 is objected to as being dependent upon a rejected base claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nina A. Archie whose telephone number is 571-272-9938. The examiner can normally be reached on Monday-Friday 8:30-5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Shanon Foley can be reached on 571-272-0898. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nina Archie
Examiner
Art Unit 1645

/Nina A Archie/
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/Mark Navarro/
Primary Examiner, Art Unit 1645